El Salvador - Connectivity (HDM-4)

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Overview

Identification

COUNTRY
El Salvador

EVALUATION TITLE
Connectivity (HDM-4)

TRANSLATED TITLE
El Salvador I/ Proyecto de Conectividad

EVALUATION TYPE
Independent Evaluation

ID NUMBER
DDI-MCC-SLV-IE-CONN-HDM4-2019-v01

Version

VERSION DESCRIPTION
- v01: Edited, anonymous dataset for public distribution.

Overview

ABSTRACT
Economic Analysis and Independent Evaluation Services

The Evaluation Team (ET) will conduct an independent calculation of the post-project economic rate of return (ERR) achieved by the activities within the delivered compact projects. This economic evaluation will be supplemented by a qualitative review across a series of standardized research questions (RQs). The specific research areas (RAs) and RQs to be reviewed as part of this independent evaluation are as follows:

RA0: Project Implementation. RQ0: Was the Connectivity Project implemented according to plan?

RA1: Engineering Analysis and Economic Model. RQ1: What is the Connectivity Project's economic return - calculated in terms of vehicle operating costs (VOC) savings and travel time savings (TTS)? What factors drove changes to the ERR over time? Optional: How could the project have been designed to result in a higher ERR?

RA2: Road Maintenance. RQ2: Current Practices. What is the likelihood the investments made under the Connectivity Project will remain adequately maintained? Based on this assessment, what set of maintenance assumptions should be used in the Fourth Highway Development and Management (HDM-4) model to yield the best estimate of road investment costs and benefits?

RA3: Road Usage Patterns. RQ3a: Current Users. Who is traveling on the road, why, what are they transporting, what are they paying for transport and how long does it take to move along key routes? RQ3b: Changes in Road Usage Patterns. Have road usage patterns changed, in terms of who is traveling on the road, why, what they are transporting, what they are paying for transport, and how long it takes to move along key routes?

EVALUATION METHODOLOGY
Independent Ex-Post ERR and HDM-4

UNITS OF ANALYSIS
Individuals, Firms

KIND OF DATA

Sample survey data [ssd]

TOPICS

Topic	Vocabulary	URI
Transportation	MCC Sector	

KEYWORDS
HDM-4, Roads, Transportation, Road Users

Coverage

GEOGRAPHIC COVERAGE
Northern Zone

UNIVERSE
Road Users

Producers and Sponsors

PRIMARY INVESTIGATOR(S)

Name	Affiliation
CH2M HILL, Inc.	

FUNDING

Name	Abbreviation	Role
Millennium Challenge Corporation	MCC	

Metadata Production

METADATA PRODUCED BY

Name	Abbreviation	Affiliation	Role
CH2M HILL, Inc			Independent Evaluator

DATE OF METADATA PRODUCTION
2019-10-31

DDI DOCUMENT VERSION
Version 1.0 (October 2019); Initial Version, Evaluation Design Report

DDI DOCUMENT ID
DDI-MCC-SLV-IE-CONN-HDM4-2019-v01

MCC Compact and Program

COMPACT OR THRESHOLD
El Salvador Compact I

PROGRAM
The Connectivity Project consisted of the Northern Transnational Highway (NTH) Activity and the Network of Connecting Roads (NCR) Activity.

MCC SECTOR
Transport (Trans)

PROGRAM LOGIC
The objective was to advance economic growth and poverty reduction in the Northern Zone by improving connectivity. Key

expected outputs were reduced travel time and vehicle operating costs within the Northern Zone through the upgrade of the Northern Transnational Highway. Time savings and vehicle operating cost savings are transmitted as increased household income and ultimately reduced poverty.

PROGRAM PARTICIPANTS

The beneficiaries were identified as those living within a 5-kilometer distance of the NTH, totaling 533,667 beneficiaries along the NTH. The direct beneficiaries from road improvements are the road users, including those who may not live in direct proximity to the road but use the improved roads.

Sampling

Study Population

Road Users

Sampling Procedure

RQ0: Interviews will be conducted with at least one key informant per organization but likely up to four.

RQ2: Visual Condition Surveys and IRI Measurement, all road segments. Interviews will be conducted either with individuals or with small groups of two to three individuals. Anticipated total sample size is 32-52 respondents.

RQ3: Traffic Counts - Repeat 2012 surveys at same location to provide comparison. Use a similar time of year (i.e., November, a neutral month) to avoid seasonality bias.7 days as a minimum including a weekend. 14 days is better, to allow for any one-off events e.g. road accidents. Potential estimation errors due to calculation of annualization factors if short counts are used.

O-D Survey - The ET expects that the sample size should be equivalent to 20 percent of the total average annual daily traffic (AADT) traffic flow. The ET proposes to perform randomized sampling so that survey results are not biased.

Questionnaires

Overview

RQ0 - Interviews; Sample unit or respondent to include: MCC, MOP, FOMILENIO I, FOVIAL, other stakeholders. The interviews will allow the ET to understand from those involved some of the challenges with the implementation, reasons for design changes, and subsequent modeling of these changes. The ET staff in charge of conducting the interviews will be able to work in Spanish and English. The interviewers will use a pre-written interview guide or questionnaire.

RQ2 - International Roughness Index (IRI) - IRI is used to define a characteristic of the longitudinal profile of a traveled wheel track and constitutes a standardized roughness measurement in meters per kilometer. IRI measurements will be collected using a laser profilometer. IRI surveys can be conducted on the NTH in 2020, as these road sections have showed signs of deterioration some 7 to 10 years after construction. All sections of the NTH will be sampled.

Visual Condition Survey. Visual condition surveys will be undertaken at the same time as the IRI surveys for the NTH. A visual road condition survey in accordance with the Distress Identification Manual for the Long-Term Pavement Performance (LTPP) (DOT, 2003) will be conducted on project roads to record their condition.

Semi-Structured Interviews; MCC and FOMILENIO staff, GoES officials (including the MOP), FOVIAL staff, maintenance contractor staff, other donors, transport operators, and transport associations. Interviews will be conducted either with individuals or with small groups of two to three individuals. ET will target those respondents who are or were most closely involved in the road projects and in maintenance.

RQ3 - Traffic Counts. Information required to understand the aggregate traffic flow by vehicle type, road section, and activity. This is expected to be done via automatic traffic counts or manual classified counts (the former preferred).

Origin-Destination (O-D) Surveys; Information that explains the qualitative reasons for the journey, including what is being transported, the cost of transportation, and reasons for travel. These data will require a manual intercept survey approach. Survey will use recall method to ask road users how their travel patterns have changed since opening of road.

Data Collection

Data Collection Dates

Start	End	Cycle
2020-02-03	2020-05-03	N/A

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Data Processing

No content available

Data Appraisal

No content available